



515651

To: Refinery Plant Managers                      Office: Indianapolis  
 From: C. F. Lecher                                      Date: April 15, 1971  
 Subject: REFINERIES - AIR QUALITY STANDARDS

I sent you on April 13, 1971, copies of some portions of the proposed "National Ambient Air Quality Standards". I was particularly concerned with Section V - Control of Hydrocarbon Emissions from Stationary Sources on Page 609 of the Federal Register. This has not been taken to some of the local air pollution ordinances, or else I had not noted or been concerned before. They define volatile organic compounds as any compound containing carbon and hydrogen with or without any other element, which has a vapor pressure of 1.5 lbs. per square inch absolute or greater under actual storage conditions. Many or most of the materials involved in our operations can or could, depending upon the operating conditions, follow under this classification. The rules then could significantly affect the equipment or manner of handling in our storage, loading, or pumping operations.

To determine if and when our materials meet or exceed this vapor pressure limitation, I have made the attached curves for reference. I first took data from Perry's "Chemical Engineers Handbook" to prepare the vapor pressure vs. temperature, Cox Charts designated as one and two. Since many of the coal tar distillates are similar compounds, I plotted from these charts, the relationship of normal boiling point to the temperature at which the vapor pressure is 1.5 psia. This is on the sheet marked 13. Reference to this should be your point of interest and concern. For instance, if you have a mixture of some distillates at or beginning at 275°C, you would read off this chart that the temperature where the vapor pressure is 1.5 psia is about 155°C. Therefore, when that oil was stored at or below 155°C, the limitations of Section V would not be exceeded. But, if it were stored, loaded, or handled above 155°C, it would then be considered a volatile organic compound, to be controlled under these rules.

I would suggest that you review the normal boiling points of your liquids and slurs, comparing them with the normal boiling points against the temperature or range of temperatures under which you store, load, and pump them. We can then discuss your individual problems in more detail in the near future.

Very truly yours,

*C. F. Lecher*  
 C. F. Lecher

CFL/tk

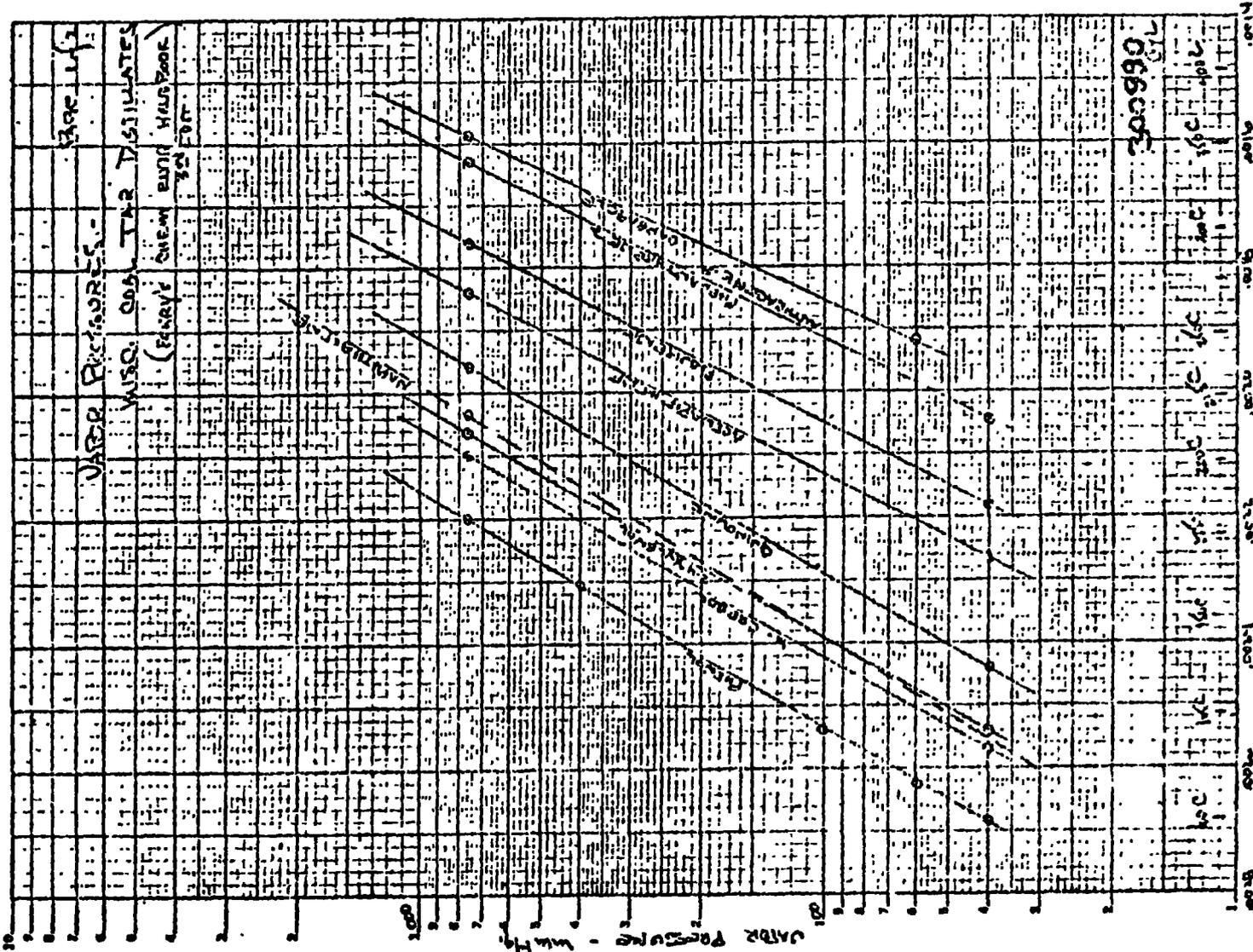
To: Mr. W. T. Varnell - Chattanooga                      Mr. R. A. Johnson - Ironton  
 Mr. J. C. Kears - Cleveland Plant                      Mr. G. H. Jackson - Leno Star  
 Mr. H. A. Smith - New York                                      Mr. C. A. Lecher - Heywood  
 Mr. H. G. Johnson - Cincinnati City                      Mr. H. R. Finch - St. Louis Park

cc: Mr. B. J. Boyle - Office  
 Mr. W. A. Justin - St. Louis Park  
 Mr. E. J. Hennessey - Kellily Lab  
 Mr. J. A. Sychalaki - Heywood

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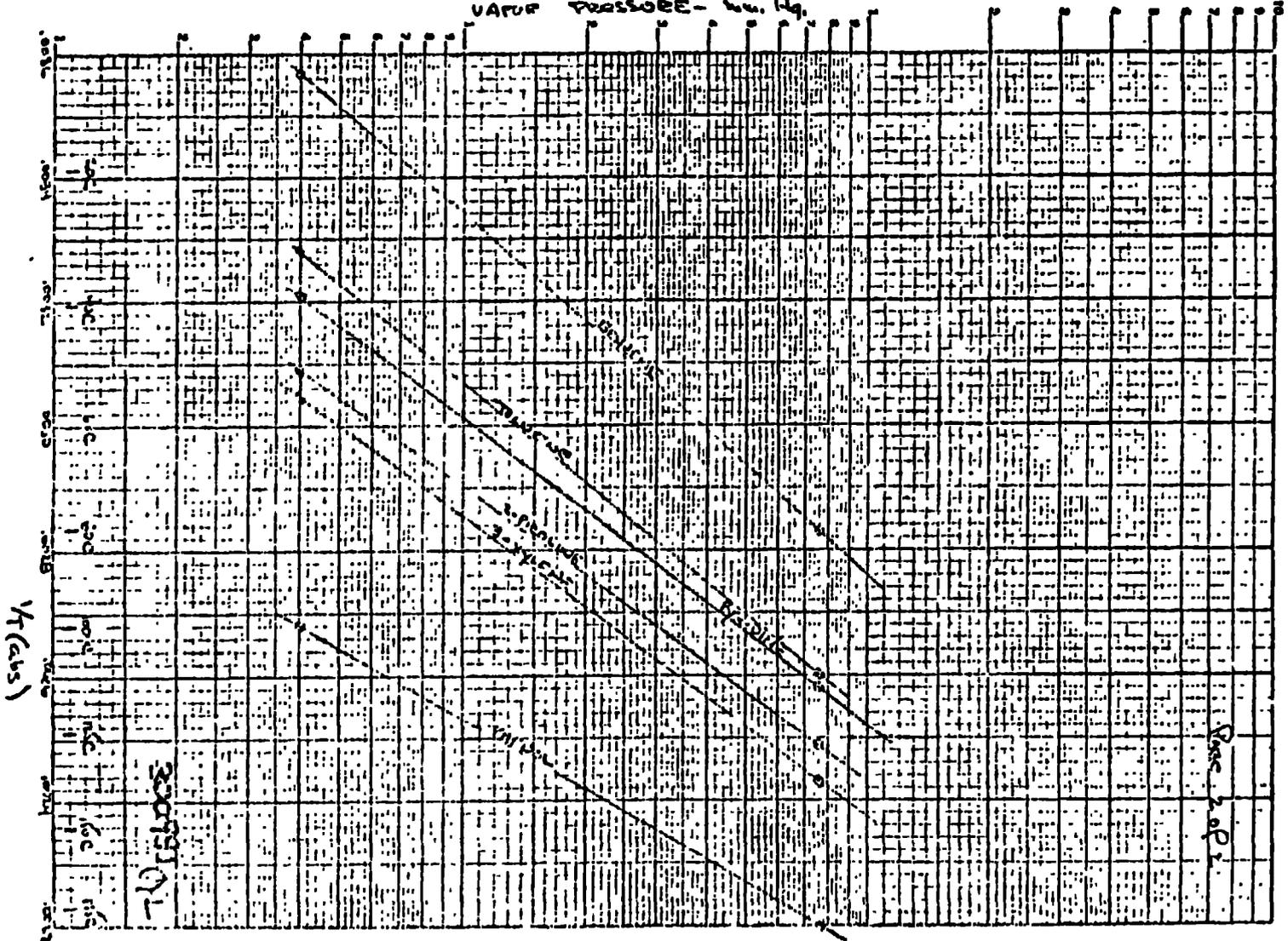


1/T (min)

KM SEMILOGARITHMIC 359-216  
FOR USE IN RECORDS  
SCALES 1 TO 1000

K-E SEMI-LOG ARITHM. 358 710  
GROUPS 8 AND 9  
CYCLES & DIVISIONS

VAPOR PRESSURE - mm. Hg.

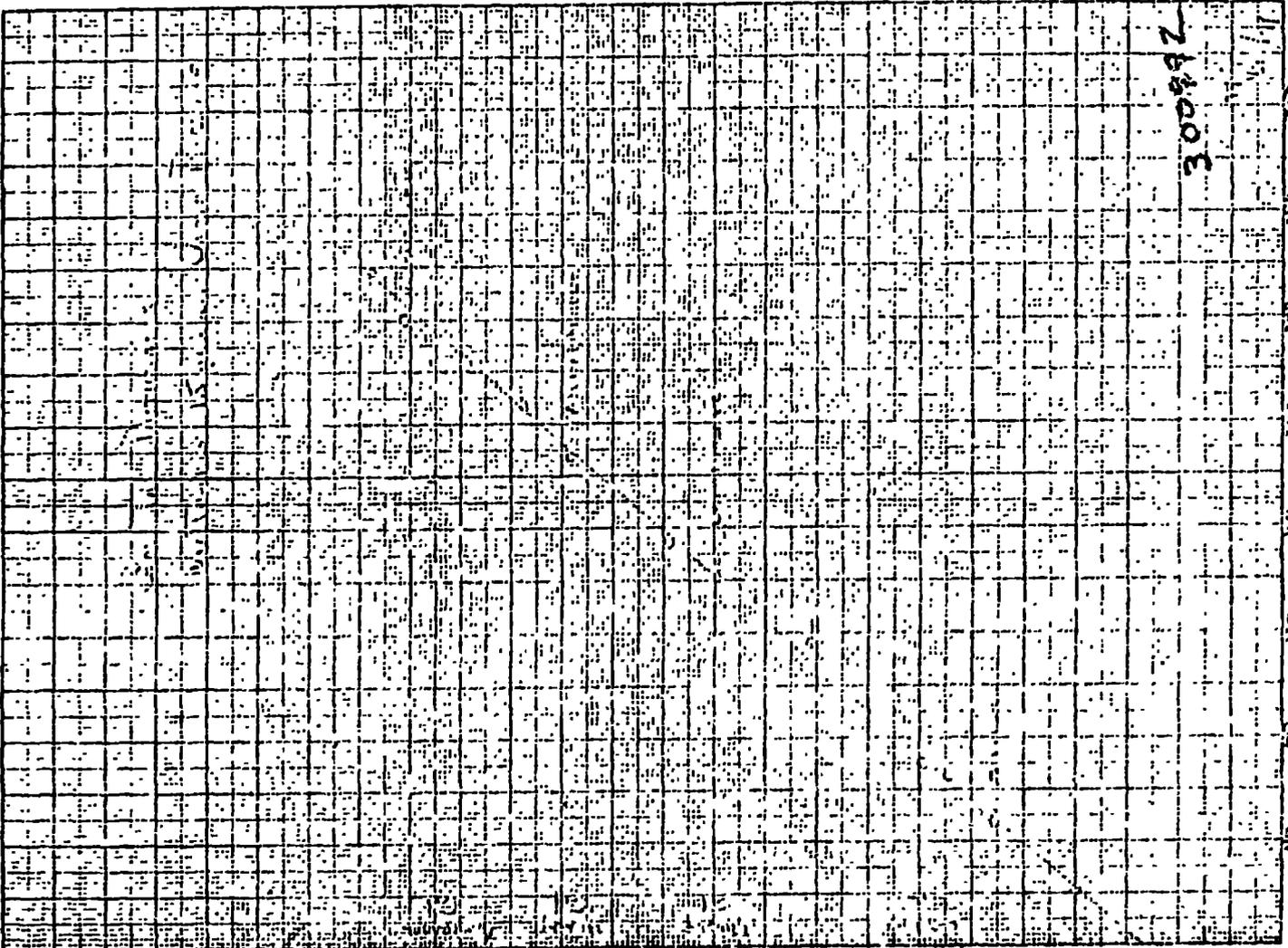


V (abs)

300 PSI

300 PSI

(3)



TEMPERATURE (°C) versus JANK PRESSURE 1.5 psi

KEY FOR TO THE CENTERMAN AND HIS

GENERAL & BATES CO.

Boiling Points (°C) of

of